Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please amend claims 1, 5, 6, 21, and 22 as follows:

1.   (currently amended): A multiplexed voice communication system, comprising:

a first plurality of telephone sets connected to first termination equipment which terminates said first plurality of telephone sets in a first location,

a second plurality of telephone sets connected to second termination equipment which terminates said second plurality of telephone sets in a second location, and

respective packet network telephone gateways connected to said first and second termination equipment and to a packet network whereby said packet gateways are arranged to multiplex voice telephone calls from said first plurality of telephone sets to said second plurality of telephone sets by establishing a single transport level connection which is maintained so long as voice calls are being made between the first and second locations with information from a number of voice telephone calls directed to different ones of said second plurality of telephone sets multiplexed into a single packet.

2.   (original): The system of claim 1, wherein said packet network is the Internet.

3.   (original): The system of claim 1, wherein a central office comprises said termination equipment.

3

4.   (original): The system of claim 1, wherein a private branch exchange comprises said termination equipment.

5.   (currently amended): The system of claim 2, wherein said packet network telephone gateways operate to establish a packet network connection in response to a request from a user associated with one of said telephone sets and said gateways establish a channel for each user within ~~each~~ said single transport level connection.

6.   (currently amended): The system of claim 5, wherein said packet network telephone gateways operate to digitize voice signals from said telephone sets, to multiplex blocks of such digitized voice signals onto ~~a~~said single transport level connection, and to packetize said multiplexed voice signals.

Claims 7-18   (cancelled)

19.   (previously presented): A telecommunications system employing the Internet in the routing of voice information from an origination point to a destination point comprising:

a plurality of communications switches; and

a plurality of Internet transport gateways for interfacing respective ones of communications switches with the Internet such that voice information received from different originators at the origination point and exchanged between ones of the gateways is multiplexed at the same transport level connection and in one data packet that is sent over the Internet, the same transport level connection is maintained so long as voice information is received from one of the different originators.

4

20.   (previously presented): A telecommunications system employing the Internet in the routing of voice information from an origination point to a destination point comprising:

a plurality of communications switches; and

a plurality of internet transport gateways for interfacing respective ones of the communications switches with the Internet such that voice information received from different originators at the origination point and exchanged between ones of the gateways is multiplexed at the same transport level connection and in different data packets that are sent over the Internet.

21.   (currently amended): An ~~apparatus~~ interface telephony gateway comprising:

a network card:

an input for receiving a plurality of voice calls; and

an ~~interface telephony gateway~~ controller controlling the network card to ~~establishing~~ a transport level connection over the Internet, the controller operating to multiplexing voice information from the plurality of voice calls into a single data packet onto the transport level connection ~~voice information from the plurality of voice calls into one data packet~~, and to maintaining the transport level connection so long as voice information is received from one of the plurality of voice calls through the input.

22.   (currently amended): A method comprising:

receiving a plurality of voice calls;

establishing a transport level connection over the Internet;

multiplexing on the transport level connection voice information from the plurality of voice calls into ~~one~~a single data packet; and

5

maintaining the transport level connection so long as voice information is received from

one of the plurality of voice calls.

Please add the following new claims:

23.   (new): The interface telephony gateway of claim 21 wherein said controller

operates to establish a packet network connection in response to a request from a user associated

with one of said plurality of voice calls and said controller establishes a channel for the user

within said transport level connection.

24.   (new): The interface telephony gateway of claim 23 wherein said controller

operates to provide a channel identification for said channel.

25.   (new): The interface telephony gateway of claim 24 wherein said controller

operates to send sequence numbers in setup and teardown messages to allow for re-use of the

channel identification.

26.   (new): The interface telephony gateway of claim 21 wherein said controller

operates to derive the length of a payload block from payload type information included within a

packet header.

27.   (new): The interface telephony gateway of claim 21 wherein said input is a

telephony processor, said telephony processor converting the plurality of voice calls from analog

form to digital form.

28.   (new): The interface telephony gateway of claim 21 wherein the single data

packet includes at least two frames of voice information originating from at least two distinctly

separate voice calls.

6

Appl. No. 09/977,643
Amdt. dated February 8, 2006
Reply to Office Action of November 10, 2005

29.   (new): The method of claim 22 further comprising:

terminating the transport level connection when all of the plurality of voice calls are

disconnected.

30.   (new): The method of claim 22 further comprising:

establishing a channel for each voice call.

31.   (new): The method of claim 30 further comprising:

re-using a channel of a voice call when the voice call is disconnected.

7